National Aeronautics and Space Administration

Roundup

Lyndon B. Johnson Space Center

August | 2010

Telling our Recovery Act story

JSC Column

On the cover:

Through teamwork and innovation, the Recovery Act has changed Johnson Space Center's landscape for the better.

NASA PHOTO

The school year is about to begin, and our children will once again be walking, biking and riding buses and other vehicles to their schools. I am asking everyone on our Johnson Space Center team to drive safely and patiently, setting the kind of example all adults should set for our young people. That means concentrating on the road ahead and on the vehicles and pedestrians around us instead of talking on a cell phone, or even worse—texting while driving.

Studies are now showing what should be obvious: talking on cell phones and texting while driving are causing accident rates to increase significantly. As a result, it is illegal to use a cell phone while driving in many parts of the country, including New York state, Washington, D.C. and, of course, at JSC. We're all in a hurry in our increasingly hectic society, but that is no excuse for rude, impatient or unsafe driving. Give yourself more time by leaving a few minutes earlier, concentrate on your driving skills, be tolerant of others and arrive safely—without your blood boiling.

I am immensely proud of the contributions our employees make to the communities we live in around JSC. Please continue to contribute to the safety of our children and neighbors by driving responsibly and setting the best example possible.

Mike

ESA 2010 MPS for OSIRIS Team MPS/UPD/LAM/IAA/RSSD/INTA/UPM/DASP/IDA

Photo of the month:

On its way to a 2014 rendezvous with comet 67P/Churyumov-Gerasimenko, the European Space Agency's Rosetta spacecraft flew past asteroid Lutetia on July 10. The NASA instruments aboard Rosetta recorded the first close-up image of the biggest asteroid visited by a spacecraft so far. The spacecraft passed the asteroid at a minimum distance of 1,950 miles and at a velocity of nine miles per second, completing the flyby in just one minute.

In this edition …

NASA/PHOTO 470736MAIN_PIA13266_FULL

Stephen of COLBERT fame treads on Johnson Space Center grounds


By Laura Rochon and Neesha Hosein

As the STS-132 crew was launching on May 14, Johnson Space Center got a galactic visit from the king of the Colbert Universe, the self-described Sir Dr. Stephen T. Colbert, star of "The Colbert Report" on Comedy Central.

Colbert jokingly took credit for bringing some "heat to the Hill" on behalf of NASA. "Yes, I saved the space program," Colbert said prior to airing the three-part JSC segment, Fallback Position: Astronaut. "NASA appreciates my heroism since I've been invited by NASA to go through astronaut training."

Colbert is a fan of NASA, and the feeling is mutual. On the series, Colbert said, "I'm a big believer in human spaceflight. Kids don't look up to robots. No kid follows around a Roomba® and says, 'I want to be a vacuum cleaner when I grow up.'"

NASA/BLAIR JC2010E086547

Stephen Colbert puts in a hard workout on the treadmill that bears his name.

The treadmill named COLBERT

Colbert's visit to JSC was the culmination of his famous campaign to win NASA's "Name Node 3" contest. Tranquility was the winner, but Colbert's consolation prize was NASA naming the new space station treadmill after him, the Combined Operational Load Bearing External Resistance Treadmill (COLBERT).

"The treadmill is actually better than the node," Colbert said on his show. "Do you know why? Because the Node is just a box for the treadmill. Nobody wants to say, 'Hey, my mom bought me a Nike box.' They want the shoes that are inside … and no matter how far the space station goes, my treadmill will have always gone a few miles more—thanks to NASA for acquiescing to our demands."

Many of Colbert's programs have featured astronaut guests, including Suni Williams and Garrett Reisman, whom Colbert recently interviewed in flight during the STS-132 mission.

Before introducing the *Atlantis* crew, Colbert told the audience America needs to save the human spaceflight program because his lifelong dream is to be an astronaut. "I've already started at home getting used to weightlessness; I've let my muscles atrophy for 46 years," Colbert said.

Colbert asked if the batteries replaced on the shuttle during a spacewalk were AAs. Astronaut Mike Good replied they were actually 400 pounds, and joked, "Garrett and I had to work out in the gym to go out on those spacewalks."

"I thought nothing weighs anything in space," Colbert said. "Did I just catch you in a space lie?"

During the interview there was a temporary loss of communication, which prompted Colbert to tell Commander Ken Ham: "I'm afraid we just lost your signal; I'm going to assume that an alien just burst out of your chest."

At one point, Colbert asked about the suspicious accent onboard. "Yes, it's true—we can say openly in the modern era, Piers [Sellers] is from England," Reisman said. Colbert then asked if Piers was coming back on the space shuttle or space lorry. Sellers said he was "traveling in the boot of the shuttle and will come back as soon as I've had my immigration papers sorted out."

Astronaut training begins

The "astronaut-in-training" tour at JSC began with a mock recruiting interview by astronaut Steve Lindsey, who asked Colbert why he wanted to be an astronaut and whether or not he could handle six months in space.

"Obviously, the jump suits are a big part of the draw," Colbert replied. "It's slenderizing, and orange is my color." He also volunteered: "I have a tendency to lash out in low gravity. I have spastic colon. I need a lot of time alone, a fear of tubes and wiring, and I'm not good with heights or following orders."

Astronaut Mike Gernhardt gave Colbert a tour of the Lunar Electric Rover (LER) before letting him take the wheel, guiding him through

(continued on next page)

NASA/BLAIR JSC2010E086544

Colbert poses with astronaut Mark Kelly, his training partner in the shuttle simulator.

NASA/BLAIR JSC2010E086506

Colbert and astronaut Steve Lindsey share a laugh before Colbert's mock interview to become a member of the Astronaut Corps.

some crab (sideways) driving and negotiations over small craters at the lunar rock yard. Colbert said he thought the LER looked like "Tony Stark [Iron Man] made a golf cart," and asked Gernhardt, "Does this thing have Xbox? Because I will school you at Halo!"

"Mr. Colbert had the opportunity to experience simulated microgravity Extravehicular Activity (EVA) training using the Partial Gravity Simulator, or POGO," said Matthew Gast, an EVA instructor. "Wearing a harness and suspended from the POGO's air-bearing rail, (he) practiced translating across (station)-style handrails, engaging and releasing bolts using the pistol grip tool and operating tethers."

Gast said controlling your body orientation in this configuration is a challenge and requires a steep learning curve. Colbert agreed, but still managed to toss out a few jokes while attempting some acrobatic moves, remarking it was much more difficult than he envisioned, but also "a lot more fun."

Next, Colbert sat in the cockpit of the Shuttle Motion Base Simulator alongside astronaut Mark Kelly, who said Colbert was a smart guy and quick study. Kelly briefly instructed Colbert on where the instruments were and which buttons to press during the simulated failure scenario where the crew launched and landed the shuttle with only a single engine then returned to the launch site.

Instructor Luke Miles, who was running the simulator from the console, said Colbert was hilarious, and that he and Kelly were an entertaining battle of wits. "We were cracking up in the instructor station," Miles said. "Colbert was wearing an orange launch/entry spacesuit from a costume shop."

"In regards to your suit, my daughter has one of these as well." Kelly told Colbert, who asked if his daughter is an astronaut. "She's 12."

"Very, very brave 12 year old," Colbert replied. "I paid $89.99 for this, Mark. What's not real about that?"

After a successful simulated shuttle landing Colbert said: "We put the biscuit in the basket."

Colbert leaves a lasting impression with JSC team members

Paul Uranga, control propulsion instructor, said Colbert flew the shuttle trainer amazingly well: "When you have two pilots in the front, both sticks are active so the trainer can cancel out the other's mistakes." But Kelly never had to take over the controls.

Stephanie Turner, astronaut crew scheduler, said Colbert told Commander Kelly he was going to ask a lot of ridiculous questions and "take ignorance to a whole new level." But Turner, like many others, got the impression that while he was being funny and entertaining, Colbert genuinely respected what NASA does as an organization.

Robert Tweedy, trainer for the COLBERT, said Colbert's enthusiasm for running on the treadmill was obvious, and he was impressed with the hardware. "If he decides to quit his day job, he's welcome back in the training room to pick up where he left off," Tweedy said.

When asked if his day of training at JSC had inspired a career change or relocation to Houston, Colbert said, "I'm ready to do it. Well, this is really my fallback position if the whole showbiz/pundit thing doesn't work out. I figured, why not be an astronaut?"

So, as Colbert wrapped up his day, we asked him how it felt to have our astronauts walking all over him.

"That is an unbelievable honor—they can stomp on me all they want," Colbert said.

At the end of his nearly 12-hour agenda, Colbert was ready to be officially declared an astronaut.

"I had earned the admiration of my peers by giving it my all, blood, sweat and vomit," Colbert said, summing up his experience at JSC. "All that was left was to make it official. So, commander: am I an astronaut?"

As Lindsey was about to deliver the potentially disappointing verdict, Colbert dashed off, saying, "Too late!"

And so he became a self-proclaimed astronaut.

NASA/BLAIR JSC2010E086540

Colbert is confident in his shuttle-handling abilities.

Homemade **electric car** sparks curiosity

By Hallie Mann

With gas prices jumping and the popular trend of "going green" becoming the norm, people are looking at electric cars as an alternative way to get around. Johnson Space Center has even put electric car parking spots in some locations to encourage environmentally friendly behavior.

Roque Haines, an ARES employee in International Space Station Safety and Mission Assurance, went a step further and built (yes, built) an electric car to get to work each day.

Haines pulls up to Building 20 every morning in his red, revamped 1974 Aztec 7 electric car. The car runs on 15 eight-volt golf cart batteries for the main engine, with a 12-volt accessory pack of batteries to power the headlights and turn signals. Haines said his electric car uses one-tenth the amount of mechanical parts than a traditional car. While he's only pushed this car to 55 mph, it can reach 85 mph at full speed.

Haines' car is actually an electric car conversion: he used the body and chassis of a gasoline-fueled car, took out the motor and replaced it with an all-electric motor. He spent about two-and-a-half years building and redesigning his car. With the occasional change of batteries and tires, this car will last Haines 20 to 30 years. Haines may have splurged for the flashy rims, but so far he's only spent $11,000 to build a fully functional electric car.

"It's not an electric car unless it plugs in," Haines said. "The hybrids you see aren't as fuel efficient as a true electric car."

Haines explained that home conversion is the cheapest and easiest way for the consumer to get an electric car. With wait lists already two years long on the new Chevrolet Volt, he advocates that people look into making their own electric car. Conversion kits and parts are readily available and can be purchased for popular makes and models.

NASA/MARKOWITZ JSC2010E103625

Roque Haines leans against his homemade electric car, a 1974 Aztec 7, which he parks in a special electric-car parking spot near Building 20.

"The body on most electric cars is fairly boring and typical," Haines said. "With conversion kits, you can turn a Porsche into an electric car."

Haines' car is turning heads here at JSC. While the red sports car body is eye-catching, it's the yellow electric cord coming out of the back of it that has caught the attention of eco-lovers at NASA.

Get the full scoop on this incredible machine on JSC Features: http://www.jsc.nasa.gov/jscfeatures/

Astronaut Shannon Walker encourages **students** to think **big** for video contest

By Jenna Maddix

For some local students, getting an exclusive behind-the-scenes tour of Johnson Space Center wasn't the best part of their special day. Rather, it was sitting in the viewing room of Mission Control to see astronaut Shannon Walker lift off from Baikonur Cosmodrome in Kazakhstan to the International Space Station.

The students received this special honor by winning a local video competition that Walker sponsored.

NASA/PHOTO

Video-contest winners Nicole Lewis, Lauren Gray and Deanna Hausman in the Mission Control viewing room.

Being the first native Houstonian in space, Walker wanted to do something for kids in the greater Houston area. She posted a video on NASA's YouTube channel, ReelNASA, asking students to submit a video answering the question, "Why should the United States continue to explore space?"

The video competition ran from April 1 to May 14. The local winners were Nicole Lewis and Lauren Gray, two students at Bauerschlag Elementary from Clear Creek Independent School District. They presented "Why the United States Should Explore Space" to win in the elementary school category.

Winners for the high school entry were Manjot Singh Jawa from the Cypress-Fairbanks Independent School District with "Generation's Dreams," and Deanna Hausman from Katy Independent School District with "We Choose Space."

"I had all these ideas of why the United States should continue to explore space, and I would talk to my friends in never-ending rants," said high school winner Deanna Hausman. "When I saw the contest I was so excited, because I might get a reward for ideas I was already working on."

Walker graduated from Westbury Senior High. She's been employed at JSC since 1987 and was selected as an astronaut in 2004. Walker trained for a six-month mission to the International Space Station and is part of Expedition 24/25.

Telling our Recovery Act story


By Neesha Hosein and Steve Elsner

Johnson Space Center and the Recovery Act

When the American Recovery and Reinvestment Act of 2009 (ARRA), was signed into law in February 2009, Johnson Space Center leaders understood that our center team would be prominent stakeholders in NASA's Recovery Act implementation. This indeed has been the case, given that about 28 percent (over $280 million) of the agency's ARRA funding has been distributed to JSC.

The ARRA funded $50 million to restore facilities damaged by hurricanes in 2008. Of the $400 million allocated to the Exploration Systems Mission Directorate (ESMD), $166 million was put onto the Lockheed Martin prime contract for Orion, $51 million was to stimulate commercial crew transportation capabilities and development of human rating requirements, and $15 million was given to the International Space Station Program to accelerate development of a common docking adapter. JSC has also received nearly $1.6 million from the Science Mission Directorate's Airborne Science Program. This funding is being used to help keep our venerable WB-57 aircraft soaring the skies and performing crucial science missions.

PHOTO/ GILBANE BUILDING COMPANY

Recovery Act funds enable the center to do necessary repairs on roofs and more after the devastation of Hurricane Ike.

Hundreds of our colleagues from around the center are contributing to the success of NASA's ARRA efforts. We hope you will join us in celebrating their achievements.

For more details about NASA's role in the Recovery Act, go to: http://www.nasa.gov/recovery/index.html

Recovering from Hurricane Ike

Hurricane Ike struck JSC two years ago and was the third most destructive storm to ever make landfall in the United States. Ike caused an estimated $90 million in damage to our facilities. Phase I of the recovery efforts started immediately, with $30 million the agency made available. To fund Phase II, JSC was fortunate to be given all $50 million of the ARRA funding designated for restoration of NASA facilities. Over 50 buildings have received some type of repair. Updates included replacing roofs, repairing loggia ledges, re-caulking and waterproofing building panels, rebuilding a hangar, replacing about 100 lights and poles, replacing nearly 2,400 windows, safing the barge dock and replacing damaged carpeting.

The inconveniences have been many considering that the campus has not hosted this much construction activity since the mid 1960s. The good news is that the Phase II effort is in the home stretch. Most of the work will be completed by the end of September. The repairs will significantly improve the sustainability of our infrastructure. Asbestos, lead and polychlorinated biphenyls are being abated. The roofs, lights and windows will be more energy efficient. And, the roofs will also be significantly more resistant to damage from future storms, but hopefully Mother Nature does not test them anytime soon.

Orion Project gets a boost

NASA is using ARRA funds to promote design, development and testing of Orion systems. This will provide a better understanding of next generation technologies that can be applied to future human-operated spacecraft. Evaluating materials like advanced aluminum alloys and titanium fasteners will lead to better understanding the limitations and help ensure mission safety and success.

NASA/PHOTO jsc2009e152301

Lockheed Martin is building an Orion crew module Ground Test Article at NASA's Michoud Assembly Facility in New Orleans.

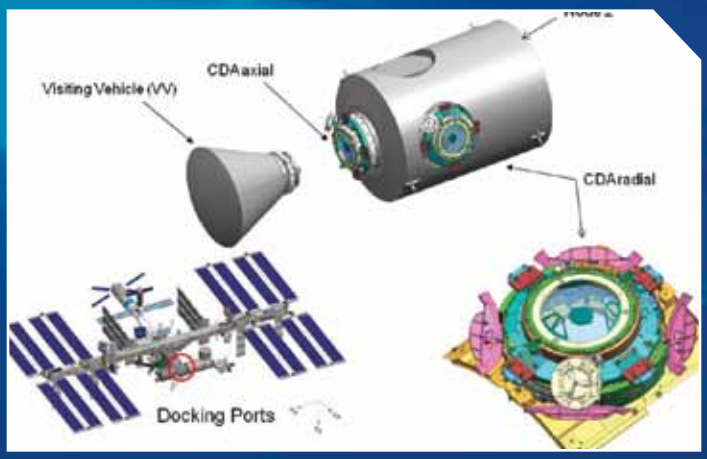
Purchase of long lead components will enable design of Engineering Development Units (EDUs). The EDUs include avionics systems' integrated circuit builds, communication systems hardware, avionics integrated lab testing infrastructure, docking hatches, lightweight window materials and propulsion and environmental control system units. The fidelity of the Orion ground test article will also be increased, which will reduce technical risk by improving the

understanding of the structural loads environment.

Additionally, in May, the planned Orion Project content was re-scoped to reduce risk to the completion of planned work for Fiscal Year 2010, deemed to be higher priority than the originally scoped work that had been accelerated. This shift in scope also assures the continuation of the Orion development contract further into this fiscal year and the preservation of the associated jobs. The ARRA funds were used to fund the majority of the work performed under the Orion Lockheed Martin prime contract through June.

Docking made easier

The International Space Station Common Docking Adapter (CDA) will host the next generation in advanced docking systems for human spaceflight. The CDA will create a universal method for attaching to the station. A common system for spacecraft docking supports the space station's operating environment, especially with multiple



NASA/PHOTO

The Common Docking Adapter will be installed on the axial and radial ports of space station's Node 2 module and provide a new docking interface for a wide variety of visiting vehicles.

visiting docking vehicles—including international spacecraft and the new U.S. commercial crew vehicles. Using low-impact technology, the CDA will permit a wide variety of vehicles— from light to massive ones—to dock to station, and is adaptable to multiple existing vehicle docking designs.

The current generation docking system for station employs use of Pressurized Mating Adapters hosting the Russian-developed Androgynous Peripheral Attach System (APAS). The APAS is a mechanically based docking system that traces its roots back to the Apollo-Soyuz Test Project in the mid 1970s. This was the first time spacecraft from two nations docked together in space. Later, the system was adopted as the primary docking mechanism for the Shuttle-Mir missions. More recently, it has been used in the shuttle docking system for all shuttle missions to the space station. Docking the past, present and future is coming together in low-Earth orbit.

Commercial crew and human rating

The ARRA provided the agency an opportunity for additional investment in the development of commercial capabilities using the successful Commercial Orbital Transportation Services philosophy. The agency portfolio for using ARRA funds included applying $50 million of the ESMD allocation to sponsor new Space Act Agreements (SAAs) for commercial crew development.

Early this year, through an open competition, five SAAs were awarded to new commercial partners: Blue Origin, Paragon Space Development, Sierra Nevada, United Launch Alliance and The Boeing Company. These companies are partnering with NASA to demonstrate capabilities that range from subsystem components to complete spacecraft. This step is the first taken by NASA consistent with the president's direction to foster commercial human spaceflight capabilities.

Additionally, $1 million of ESMD ARRA funds were dedicated to support creation of a consolidated set of requirements and standards necessary to achieve NASA human-rating certification for space systems. NASA contracted with Wyle through the Space Life Sciences Directorate to develop three draft documents. Two of these documents will address tailored health and medical requirements for NASA crew in a commercial spacecraft and outside of it after landing. The third draft document will provide guidance for commercial spacecraft designers on methods they can use to verify specific NASA health and medical requirements.

Keeping our WB-57 aircraft flying

NASA has the world's only two remaining flightworthy WB-57s, and both reside at JSC. This aircraft provides a key capability for researchers to operate large payloads at altitudes in excess of 60,000 feet for Science Mission Directorate's Airborne Science Program, supplying key Earth science data. The WB-57 is a heavy-lift, high-altitude version of a bomber that was originally built by the British in the 1950s. JSC has kept them flying for so long that there is currently no ready source of spare parts.

One key component that JSC currently has no spares for is the aileron. An aileron is a control surface located on the trailing edge of each wing that controls the aircraft in the roll axis. Without this critical part in operational condition, the aircraft would be grounded.

NASA seized the opportunity with ARRA funding to embark on a program to provide spare aileron assemblies and associated miscellaneous parts. They are being procured in a phased approach, using an existing contract with Computer Sciences Corporation. This work is well under way, and when finished, will provide the WB-57 Project Office with four sets of flight-ready aileron assemblies next year. With the additional spare parts JSC expects to get, these high-flying aircraft will be "spared" from retirement.

NASA/PHOTO s99-13959

The Recovery Act is keeping our WB-57 aircraft flightworthy for the future by investing in crucial spare parts.

NASA finds **super-hot** planet with unique comet-like tail

Astronomers using NASA's Hubble Space Telescope have confirmed the existence of a baked object that could be called a "cometary planet." The gas giant planet, named HD 209458b, is orbiting so close to its star that its heated atmosphere is escaping into space.

ILLUSTRATION CREDIT: NASA, ESA, AND G. BACON (STSCI)

Artist's concept of Extrasolar Planet HD 209458b.

Observations taken with Hubble's Cosmic Origins Spectrograph (COS) suggest powerful stellar winds are sweeping the cast-off atmospheric material behind the scorched planet and shaping it into a comet-like tail.

"Since 2003, scientists have theorized the lost mass is being pushed back into a tail, and they have even calculated what it looks like," said astronomer Jeffrey Linsky of the University of Colorado in Boulder, leader of the COS study. "We think we have the best observational evidence to support that theory. We have measured gas coming off the planet at specific speeds, some coming toward Earth. The most likely interpretation is that we have measured the velocity of material in a tail."

The planet, located 153 light-years from Earth, weighs slightly less than Jupiter but orbits 100 times closer to its star than the Jovian giant. The roasted planet zips around its star in a short three-and-a-half days. In contrast, our solar system's fastest planet, Mercury, orbits the sun in 88 days.

The extrasolar planet is one of the most intensely scrutinized because it is the first of the few known alien worlds that can be seen passing in front of, or transiting, its star. Linsky and his team used COS to analyze the planet's atmosphere during transiting events. During a transit, astronomers study the structure and chemical makeup of a planet's atmosphere by sampling the starlight that passes through it. The dip in starlight because of the planet's passage, excluding the atmosphere, is very small—only about 1.5 percent. When the atmosphere is added, the dip jumps to eight percent, indicating a bloated atmosphere.

Although this extreme planet is being roasted by its star, it won't be destroyed anytime soon. "It will take about a trillion years for the planet to evaporate," Linsky said.

Apollo-Soyuz: An orbital partnership begins

Most of us take it for granted today that American astronauts and Russian cosmonauts live and work together in Earth orbit. But before the two Cold War rivals first met in orbit in 1975, such a partnership seemed unlikely. Since Sputnik bleeped into orbit in 1957, the superpowers were driven by the Space Race, with the United States and then-Soviet Union driven more by competition than cooperation.

But by the mid 1970s, things had changed. America had "won" the race to the moon, with six Apollo landings between 1969 and 1972. Both nations had launched space stations, the Russian Salyut and American Skylab. With shuttle still a few years off and the diplomatic chill thawing, the time was right for a joint mission.

The Apollo-Soyuz Test Project would send NASA astronauts Tom Stafford, Deke Slayton and Vance Brand in an Apollo Command and Service Module to meet Russian cosmonauts Aleksey Leonov and Valeriy Kubasov in a Soyuz capsule. A jointly designed, U.S.-built docking module fulfilled the main technical goal of the mission, demonstrating that two dissimilar craft could dock in orbit. But the human side of the mission went far beyond that.

The training leading up to the mission exposed the two crews to each other's nations, breaking down cultural and language barriers. As Brand said in a 2000 interview, amid the Cold War tensions, "We thought they were pretty aggressive people and ... they probably thought we were monsters. So we very quickly broke through that, because when you deal with people that are in the same line of work as you are, and you're around them for a short time, why, you discover that, well—they're human beings."

On July 17, 1975, the five explorers and the two craft—launched two days before—approached each other for docking. As Stafford guided the Apollo forward, Soyuz commander Leonov quipped, "Tom, please don't forget about your engine." Just after noon on the East Coast in the United States, with a live TV audience watching, the two craft finally met. "Soyuz and Apollo are shaking hands now."

PAINTING/ROBERT MCCALL

This 1974 painting by artist Robert McCall depicts the planned docking of American and Soviet spacecraft. The jointly designed, U.S.-built docking adapter is mated to the top of the Apollo spacecraft at left.

The Apollo crew returned to Earth on July 19, their Russian counterparts two days later. It would be two decades until the countries teamed up again with the Shuttle-Mir Program, but the seed was planted. As Brand said, "We were a little of a spark or a foot in the door that started better communications."

Beetle Battles 2010

By Lindsey Foreman

Did you know that Johnson Space Center is under attack from an environmental pest that could have devastating impacts on our quality of life? This pest consumes trees at an alarming rate (31 trees per week) and appears unstoppable … unless we make immediate and significant changes to our business. To thwart this siege, the Green Team hosted Beetle Battles, which closed on June 17.

The Beetle Battles competition was a centerwide contest between JSC organizations to see who could stop the destruction done by the "Copy Beetle" and garner the greatest reduction in copies printed each week over a month's time. The Green Team collected past data to use as a baseline for comparison and sampled each organization's weekly paper consumption throughout the duration of the competition to determine their reduction. Organizations were paired up within a winner bracket that was released May 17. Sixteen organizations participated, and after the first week, a loser bracket gave everyone a second shot.

The Green Team hopes to make this competition an annual event, as the impact proved to be significant. During the first week of the competition, all but two organizations reduced the number of copies they made. Overall, there was a 29 percent reduction in copies the first week. To give you an idea of what 29 percent translates to, a centerwide reduction of just one percent is 129,511 pages.

During the second week, copies among the teams were down 41 percent from the historical average, and down 26 percent the third week. The average reduction among the final four was 15 percent. Just counting multifunction devices, the center makes roughly 12,951,180 copies per year. A centerwide reduction of 15 percent is 1,942,677 pages, which equals approximately two months worth of paper at our current rate. Think of the trees—and money—saved.

By the end of the competition, the final two organizations remaining were the Office of Procurement and International Space Station Program; however, Procurement pulled it out for the win. That office usually makes 15,412 copies a month, but during Beetle Battles, they made only 11,185—reducing their monthly usage by 28 percent.

In the loser bracket, the Information Resources Directorate barely beat out the Mission Operations Directorate (MOD), reducing their monthly copies by 24 percent. Honorable Mention went to MOD, which typically averages 43,000 copies per month. During Beetle Battles, they made only 33,500 copies—a 23 percent monthly reduction and also the largest quantity reduced by any organization.

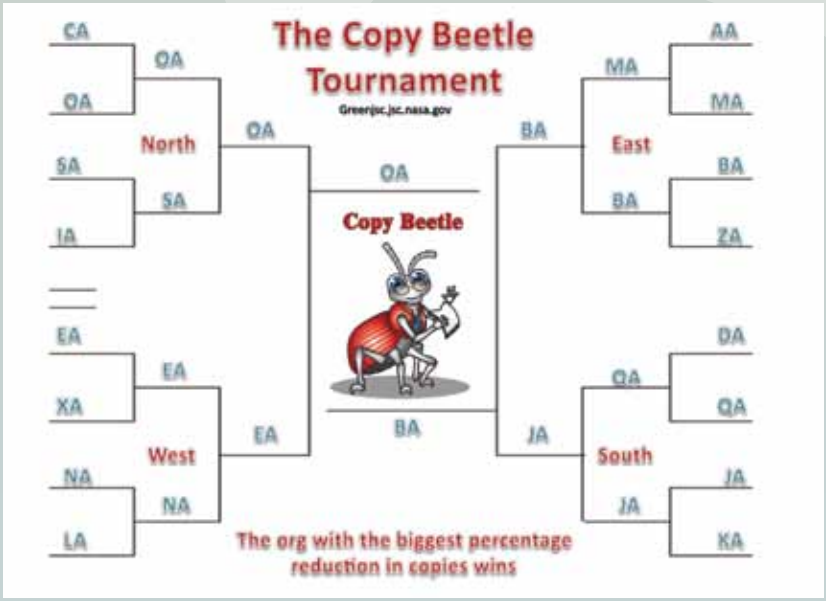
NASA/PHOTO JSC2010E095897

Back Row (left to right): Dennis Klekar, Kofi Burney, Yong Yi, Rob Way, Daniel Dela Rosa, Peter Hollis. Front Row (left to right): Jennifer S. Mason, Lindsey Foreman, Nicole Kem, Kathryn McLaurin, Jennifer Morrison. Not Shown: Mike Ewert, Samuel Henry, Eric McMichael, Judy F. Ross, Joel Walker.

Congratulations to all participants in this fun event to squash the Copy Beetle and save paper resources.

Now that this competition has come to a close, the Green Team continues its charter to educate the JSC community on how to personally make green decisions and take green actions through tackling new resources. Keep your eyes and ears open to what's next on the Green Team's agenda. Be sure to check out the Web site for access to the Copy Beetle logo for use in electronic presentations and green tips.

For more information on green efforts at JSC, visit: http://www.greenjsc.nasa.gov



Spotlight Jay Bolden

Protocol Officer, Johnson Space Center External Relations

Q: Coolest part of your job?
A: I really enjoy telling the NASA and Johnson Space Center story to guests who visit the center. It's satisfying to help guests gain a deeper understanding of space technology and hardware.

Q: Favorite hobbies or interesting things you do away from the office?
A: I'm a tinkerer and private pilot. So even in my downtime, I'm often thinking about planes.

Q: What would you be doing if you weren't in your current job at JSC?
A: My dream job is museum director/curator at the National Museum of the United States Air Force in Dayton, Ohio. I've spent a lot of time there wandering through the hangars and talking to the amazing folks who restore historic warbirds to pristine condition.

Q: What would people be surprised to know about you?
A: That before I came to NASA, I spent eight years in the Air Force.

Q: What is your favorite quote or motto?
A: "Dans la vie, il faut d'abord durer." ("In life, one must first endure.")

Q: What is your favorite sport?
A: I'm a fan of Big Ten college football.

Q: Last good book you read?
A: I recently finished "The Big Rich" by Bryan Burrough. It's about the major Texas oil families and wildcatters of the late 1800s/early 1900s. Some of the antics of these families would rival the TV show "Dallas." It was eye-opening … and now I know why so many Houston streets are named after the Cullen family.

Q: Last good article you read?
A: The Spotlight interview with me.

Q: Favorite movie?
A: It's a tie: "Coming to America" and "Top Gun." I think I've got both memorized.

Q: Favorite music, artist or band?
A: TBDBITL. If you have to ask, you aren't from the Midwest.

Q: Who are your heroes?
A: I've always looked up to Benjamin O. Davis Jr. and the Tuskegee Airmen. I think their persistence and quiet resolve speak volumes. Over the years, I've worked with and met a number of these gentlemen, and they tell great inspirational stories.

NASA/PHOTO

Jay Bolden (right) with reporter and former talk show host Geraldo Rivera.

Q: What quality do you most admire?
A: I admire dedication to getting things done right.

Q: What is your best memory at NASA or JSC?
A: I really enjoyed my first trip to the lunar samples lab, where I got to hold a moon rock (in a glovebox, of course). Then I was able to view the rocks under microscopes. It was breathtaking to see the different spectrum of colors embedded in the rocks.

WANTED!

Do you know a JSC colleague or team that does something extraordinary on or off the job? Whether it's a unique skill, interesting work, special professional accomplishment, remarkable second career, hobby or volunteerism, your nominee(s) may deserve the spotlight!

The Roundup shines the light on one special person or team each month, chosen from a cross section of the JSC workforce. To suggest "Spotlight" candidates, send your nomination to the JSC Roundup Office mailbox at jsc-roundup@mail.nasa.gov. Please include contact information and a brief description of why your nominee(s) should be considered.

'The Art of Space'

Approximately 250 children, ranging from 3 year olds to 12th graders, participated in a summer art program focusing on "The Art of Space" at the University of Houston-Clear Lake.

Students displayed their creative art pieces in the Saturn V building at Rocket Park during the Fourth of July holiday weekend.

The students created mission flight patches, collages of robotic inventions, pencil drawings of astronauts in training, as well as paintings of lunar surfaces and unexplored destinations—all inspired by space artists such as Alan Bean, Paul Calle, Robert Rauschenberg, Pat Rawlings, Josh Simpson and Chesley Bonestell.

NASA/BLAIR jsc2010e103463

Workshop on **social media** focuses on government use

Johnson Space Center's Social Media Working Group recently held its second benchmarking workshop with a focus on the use of social media by government entities. Currently, JSC uses social media tools such as Twitter, Facebook, YouTube and UStream to promote NASA. Workshop panelist James McClellan, JSC's chief technology officer, discussed how adopting social media policy and guidelines will help ensure employees are appropriately using social media.

Government social media policy and strategy were the central themes at the workshop, with presentations given by speakers from NASA, the U.S. Air Force, Transportation Security Administration and Environmental Protection Agency. Adding further expertise to the program was Dr. Debra Clark, associate professor of communications and digital media studies at the University of Houston-Clear Lake; Cameron Ballantyne of the American Red Cross Regional Southwest Blood Services; Justin Conception of the City of Houston Mayor's Office communications team; and intellectual property and business lawyer Daliah Saper of the Saper Law Offices.

NASA/BLAIR jsc2010e109923

Paul Bove, with the U.S. Air Force, gives a presentation on social media in the government.

To close the day, astronaut Timothy (T.J.) Creamer shared his novel experience as the first person to tweet live from space on Jan. 22, 2010.

Roundup

The Roundup is an official publication of the National Aeronautics and Space Administration, Johnson Space Center, Houston, Texas, and is published by the Public Affairs Office for all Space Center employees. The Roundup office is located at the Johnson Space Center, Building 2. The mail code is AD94. Visit our Web site at: http://www.jsc.nasa.gov/roundup/online/ For distribution questions or to suggest a story idea, send an e-mail to jsc-roundup@mail.nasa.gov.

Catherine Ragin Williams Editor
Neesha Hosein Assistant Editor
Logan Goodson Graphic Designer
Laura A. Rochon NASA Publication Manager
Cassandra V. Miranda Contractor Publication Manager

Congratulations to the shuttle external tank workforce

On July 8, at NASA's Michoud Assembly Facility in New Orleans, NASA and Lockheed Martin Space Systems Company paid tribute to the workforce who built the external tanks for the space shuttle fleet. The employees persevered through the challenges of Return to Flight and Hurricane Katrina to build a series of tanks that provided increasingly safer launches of shuttles.

Hundreds gathered to witness ET-138, the last newly manufactured tank to roll out of the assembly building, make its way to the Michoud Harbor.

Following the ceremony, a traditional New Orleans brass band and handkerchief-waving employees escorted ET-138 on its rollout to the harbor. The tank departed aboard the Pegasus barge on a six-day, 900-mile sea journey to Kennedy Space Center (KSC). Two tugs will tow Pegasus to the Port of Gulfport, where Freedom Star—NASA's solid rocket booster recovery ship—is waiting to tow the tank to KSC.

PHOTO/LOCKHEED MARTIN

PHOTO/LOCKHEED MARTIN